

REMARKS

Applicant requests favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 20-30 are presented for consideration in lieu of claims 10-19, which have been canceled without prejudice or disclaimer. Support for these claims can be found in the application, as filed. Therefore, no new matter has been added.

Initially, Applicant notes that the Examiner has made final the restriction requirement previously set forth. To expedite prosecution, claim 10, which was previously withdrawn from consideration, has been canceled without prejudice or disclaimer. Applicant reserves the right to file a divisional application directed to the subject matter of this claim.

Applicant requests favorable reconsideration and withdrawal of the rejection set forth in the above-noted Office Action.

Claims 11-19 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,025,658 to Kamata. Applicant submits that this patent does not teach many features of the present invention as previously recited in these claims. Therefore, this rejection is respectfully traversed. Nevertheless, Applicant submits that claims 20-30, as presented, amplify the distinctions between the present invention and the cited art.

In one aspect of the invention, independent claim 20 recites a linear motor that includes a first magnet group, a second magnet group, a support member, first and second electromagnetic coils and first and second yokes. The first magnet group has a plurality of first magnets arrayed

such that polarization directions thereof are periodically opposite and a plurality of second magnets arrayed such that polarization directions thereof are periodically opposite and intersect those of the first magnets. The second magnet group has a plurality of third magnets arrayed such that polarization directions thereof are periodically opposite and a plurality of fourth magnets arrayed such that polarization directions thereof are periodically opposite and intersect those of the first magnets. The support member supports the first magnet group on one side and the second magnet group on the other side. The first and second electromagnetic coils are disposed on both sides of the support member. The first electromagnetic coil is disposed to oppose the first magnet group to generate a Lorentz force in cooperation with the first magnet group, and the second electromagnetic coil is disposed to oppose the second magnet group to generate a Lorentz force in cooperation with the second magnet group. The first and second yokes are disposed on both sides of the support member. The first yoke is integrated with the first electromagnetic coil and the second yoke is integrated with the second electromagnetic coil.

In another aspect of the invention, independent claim 28 recites a stage apparatus that includes a stage, a linear motor which drives the stage, and an arrangement of a motor movable element and a stator. The motor movable element and the stator variously include arrangements of a first magnet group, a second magnet group, first and second electromagnetic coils, and first and second yokes, along the lines discussed above with respect to independent claim 20.

In still another aspect of the invention, independent claim 29 recites an exposure apparatus for exposing a pattern of a master to a substrate. The apparatus includes a stage which

moves at least one of the master and the substrate, a linear motor which drives the stage and an arrangement of a motor movable element and a stator. The motor movable element and the stator variously include arrangements of a first magnet group, a second magnet group, first and second electromagnetic coils, and first and second yokes, along the lines discussed above with respect to independent claim 20.

Applicant submits that the cited art does not teach or suggest such features of the present invention, as recited in independent claims 20, 28 and 29.

The Kamata patent teaches a linear motor and a stage apparatus and an exposure apparatus using the linear motor. In the Kamata patent, the linear motor includes permanent magnets that move relative to a coil, a plurality of permanent magnets arranged along the moving direction while rotating their polarity directions ninety degrees each in turn to generate a sine magnetic field. Each permanent magnet has a simple rectangular, parallelepiped shape, with two or more coils of a polyphase coil being simultaneously energized. Accordingly, the Kamata patent merely shows an arrangement of yokes integrated with permanent magnets with movement of integrated groups of the yokes and magnets and the electromagnetic coil being relative to each other.

Applicant submits, however, that the Kamata patent does not teach or suggest the salient features of Applicant's present invention as recited in independent claims 20, 28 and 29, including at least the arrangement of the first and second magnet groups, the first and second electromagnetic coils and the first and second yokes. Accordingly, Applicant submits that the

Kamata patent does not teach or suggest many features of the present invention, as recited in the independent claims.

For the foregoing reasons, Applicant submits that the present invention, as recited in independent claims 20, 28 and 29, is patentably defined over the cited art.

Dependent claims 21-27 and 30 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Further individual consideration of these dependent claims is requested.

Applicant further submits that this Amendment After Final Rejection clearly places this application in condition for allowance. This Amendment was not earlier presented because Applicant believed that the prior Amendment placed the application in condition for allowance. Accordingly, entry of the instant Amendment, as an earnest attempt to advance prosecution and reduce the number of issues, is requested under 37 CFR 1.116.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steven E. Warner", is written over a horizontal line.

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